(3) FENOC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(4) FENOC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;

(5) FENOC, pursuant to the Act and 10 CFR Parts 30, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This amended license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

FENOC is authorized to operate the facility at a steady state reactor core power level of 2900 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 275, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Auxiliary River Water System

(Deleted by Amendment No. 8)

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

DEFINED TERMS

1.1 The DEFINED TERMS of this section appear in capitalized type and are applicable throughout these Technical Specifications.

THERMAL POWER

1.2 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

RATED THERMAL POWER

1.3 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant as specified in the Licensing Requirements Manual, and shall not exceed 2900 MWt.

OPERATIONAL MODE

1.4 An OPERATIONAL MODE shall correspond to any one inclusive combination of core reactivity condition, power level and average reactor coolant temperature specified in Table 1.1.

ACTION

1.5 ACTION shall be those additional requirements specified as corollary statements to each principle specification and shall be part of the specifications.

OPERABLE - OPERABILITY

1.6 A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electric power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related safety function(s).

REFUELING WATER STORAGE TANK (RWST)

LIMITING CONDITION FOR OPERATION

3.1.2.8 The RWST shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 & 4.

ACTION:

With the refueling water storage tank inoperable, restore the tank to OPERABLE status within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.8 The RWST shall be verified OPERABLE:

a. At least once per 7 days by:

1. Verifying the boron concentration is between 2,400 and 2,600 ppm, and

2. Verifying a contained volume between 439,050 gallons and 441,100 gallons of borated water.

b. At least once per 24 hours by verifying the RWST solution temperature is $\geq$ 45°F and $\leq$ 65°F when the RWST ambient air temperature is < 45°F or > 65°F.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	ALLOWABLE VALUE	APPLICABLE MODES	ACTION
1.	Manual Reactor Trip	2	1	2	Not Applicable	1, 2, 3(3), 4(3) and 5(3)	12
2.	Power Range, Neutron Flux						
	a. High Setpoint	4	2	3	≤ 109.5% of RATED THERMAL POWER	1, 2	2
	b. Low Setpoint	4	2	3	≤ 25.5% OF RATED THERMAL POWER	1(1), 2	2
3.	Power Range, Neutron Flux High Positive Rate	4	2	3	≤ 5.5% of RATED THERMAL POWER with a time constant ≥ 2 seconds	1, 2	2
4.	DELETED						
5.	Intermediate Range, Neutron Flux	2	1	2	≤ 27.9% of RATED THERMAL POWER	1(1), 2, 3(3), 4(3) and 5(3)	3
6.	Source Range, Neutron Flux						
	a. With Rod Withdrawal Capability	2	1	2	≤ 1.3×10^5 counts per second	2(2), 3(3), 4(3) and 5(3)	4
	b. With All Rods Fully Inserted and Without Rod Withdrawal Capability	2	0	1	Not Applicable	3(8), 4(8), and 5(8)	5

ACTION 7 - With the number of OPERABLE channels[6] one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.1.

ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels and with the THERMAL POWER level above P-9, place the inoperable channel in the tripped condition within 6 hours; operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.

ACTION 9 - Not applicable.

ACTION 10 - Not applicable.

ACTION 11 - With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 6 hours.

ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

ACTION 39 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

---

(6) An OPERABLE hot leg channel consists of: 1) three RTDs per hot leg, or 2) two RTDs per hot leg with the failed RTD disconnected and the required bias applied.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	Functional Unit	Channel Check	Channel Calibration	Channel Functional Test	Modes in Which Surveillance Required
1.	Manual Reactor Trip	N.A.	N.A.	S/U[1], R[10]	N.A.
2.	Power Range, Neutron Flux				
	a. High Setpoint	S	D[2], M[3] and Q[6]	Q	1, 2
	b. Low Setpoint	S	R[6]	S/U[1]	2
3.	Power Range, Neutron Flux, High Positive Rate	N.A.	R[6]	Q	1, 2
4.	DELETED				
5.	Intermediate Range, Neutron Flux	S	R[6]	S/U[1]	1, 2, 3[14], 4[14], 5[14]
6.	Source Range[15], Neutron Flux				
	a. With Rod Withdrawal Capability	S	R[6]	Q[8]	2, 3[14] 4[14] and 5[14]
	b. With All Rods Fully Inserted and Without Rod Withdrawal Capability	S	R[6]	Q[8]	3, 4 and 5
7.	Overtemperature ΔT	S	R[6]	Q	1, 2
8.	Overpower ΔT	S	R	Q	1, 2
9.	Pressurizer Pressure-Low	S	R	Q	1, 2
10.	Pressurizer Pressure-High	S	R	Q	1, 2
11.	Pressurizer Water Level-High	S	R	Q	1, 2

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	ALLOWABLE VALUE	APPLICABLE MODES	ACTION
1. SAFETY INJECTION AND FEEDWATER ISOLATION						
a. Manual Initiation	2	1	2	Not Applicable	1, 2, 3, 4	18
b. Automatic Actuation Logic	2	1	2	Not Applicable	1, 2, 3, 4	13, 36
c. Containment Pressure-High	3	2	2	≤ 5.33 psig	1, 2, 3	14
d. Pressurizer Pressure-Low	3	2	2	≥ 1841 psig	1, 2, 3(1)	14
e. Steamline Pressure-Low	3/loop	2/loop any loop	2/loop any loop	≥ 495.8 psig steam line pressure*	1, 2, 3(1)	14

* Time constants utilized in the lead-lag controllers for Steam Line Pressure-Low are $\tau_1 \geq 50$ seconds and $\tau_2 \leq 5$ seconds. CHANNEL CALIBRATION shall ensure that these time constants are adjusted to these values.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	ALLOWABLE VALUE	APPLICABLE MODES	ACTION
4. STEAM LINE ISOLATION						
a. Manual	2/steam line	1/steam line	2/operating steam line	Not Applicable	1, 2, 3	18
b. Automatic Actuation Logic	2	1	2	Not Applicable	1, 2, 3	13
c. Containment Pressure Intermediate-High-High	3	2	2	≤ 7.33 psig	1, 2, 3	14
d. Steamline Pressure-Low	3/loop	2/loop any loop	2/loop any loop	≥ 495.8 psig steam line pressure*	1, 2, 3(1)	14
e. Steamline Pressure Rate-High Negative	3/loop	2/loop any loop	2/operating loop	≤ 104.2 psi with a time constant ≥ 50 seconds	3(2)	14
5. TURBINE TRIP & FEEDWATER ISOLATION						
a. Steam Generator Water Level--High-High, P-14	3/loop	2/loop in any operating loop	2/loop in each operating loop	≤ 90.2% of narrow range instrument span each steam generator	1, 2, 3	14

* Time constants utilized in the lead-lag controllers for Steam Line Pressure-Low are $\tau_1 \geq 50$ seconds and $\tau_2 \leq 5$ seconds. CHANNEL CALIBRATION shall ensure that these time constants are adjusted to these values.

3/4.4.3 SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting* of 2485 PSIG ±3%.**

APPLICABILITY: MODES 1, 2 and 3,
MODE 4 with all RCS cold leg temperatures > the enable temperature specified in the PTLR.

ACTION:

a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN with any RCS cold leg temperature ≤ the enable temperature specified in the PTLR and apply RCS overpressure protection requirements in accordance with Specification 3.4.9.3 within 12 hours.

b. With a pressurizer code safety valve having discharged liquid water from a water solid pressurizer to mitigate an overpressure event, be in at least HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN with any RCS cold leg temperature ≤ the enable temperature specified in the PTLR and apply RCS overpressure protection requirements in accordance with Specification 3.4.9.3 within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional requirements other than those required by Specification 4.0.5.

---

* The Lift Setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

** Within ± 1% following pressurizer code safety valve testing.

SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.4.8 The specific activity of the primary coolant shall be limited to:

a. ≤ 0.35 μCi/gram DOSE EQUIVALENT I-131, and

b. ≤ $100/\bar{E}$ μCi/gram.

APPLICABILITY: MODES 1, 2, 3, 4 and 5.

ACTION:

MODES 1, 2, and 3*

a. With the specific activity of the primary coolant > 0.35 μCi/gram DOSE EQUIVALENT I-131[(1)] for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in HOT STANDBY with T_{avg} < 500°F within 6 hours.

b. With the specific activity of the primary coolant > $100/\bar{E}$ μCi/gram, be in HOT STANDBY with T_{avg} < 500°F within 6 hours.

MODES 1, 2, 3, 4 and 5

a. With the specific activity of the primary coolant > 0.35 μCi/gram DOSE EQUIVALENT I-131 or > $100/\bar{E}$ μCi/gram, perform the sampling and analysis requirement of item 4a of Table 4.4-12 until the specific activity of the primary coolant is restored to within its limits.

SURVEILLANCE REQUIREMENTS

4.4.8 The specific activity of the primary coolant shall be determined to be within the limits by performance of the sampling and analysis program of Table 4.4-12.

---

* With T_{avg} ≥ 500°F

(1) Specification 3.0.4.c is applicable.

TABLE 4.4-12

PRIMARY COOLANT SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM

TYPE OF MEASUREMENT AND ANALYSIS	MINIMUM FREQUENCY	MODES IN WHICH SURVEILLANCE REQUIRED
1. Gross Activity Determination	3 times per 7 days with a maximum time of 72 hours between samples.	1, 2, 3, 4
2. Isotopic Analysis for DOSE EQUIVALENT I-131 Concentration	1 per 14 days	1,
3. Radiochemical for $\bar{E}$ Determination	1 per 6 months	1,
4. Isotopic Analysis for Iodine Including I-131, I-133, and I-135	a) Once per 4 hours, whenever the specific activity exceeds 0.35 µCi/gram DOSE EQUIVALENT I-131 or 100/E µCi/gram, and	1#, 2#, 3#, 4#, 5#
	b) One sample between 2 & 6 hours following a THERMAL POWER change exceeding 15 percent of the RATED THERMAL POWER within a one hour period.	1, 2, 3

#Until the specific activity of the primary coolant system is restored within its limits.

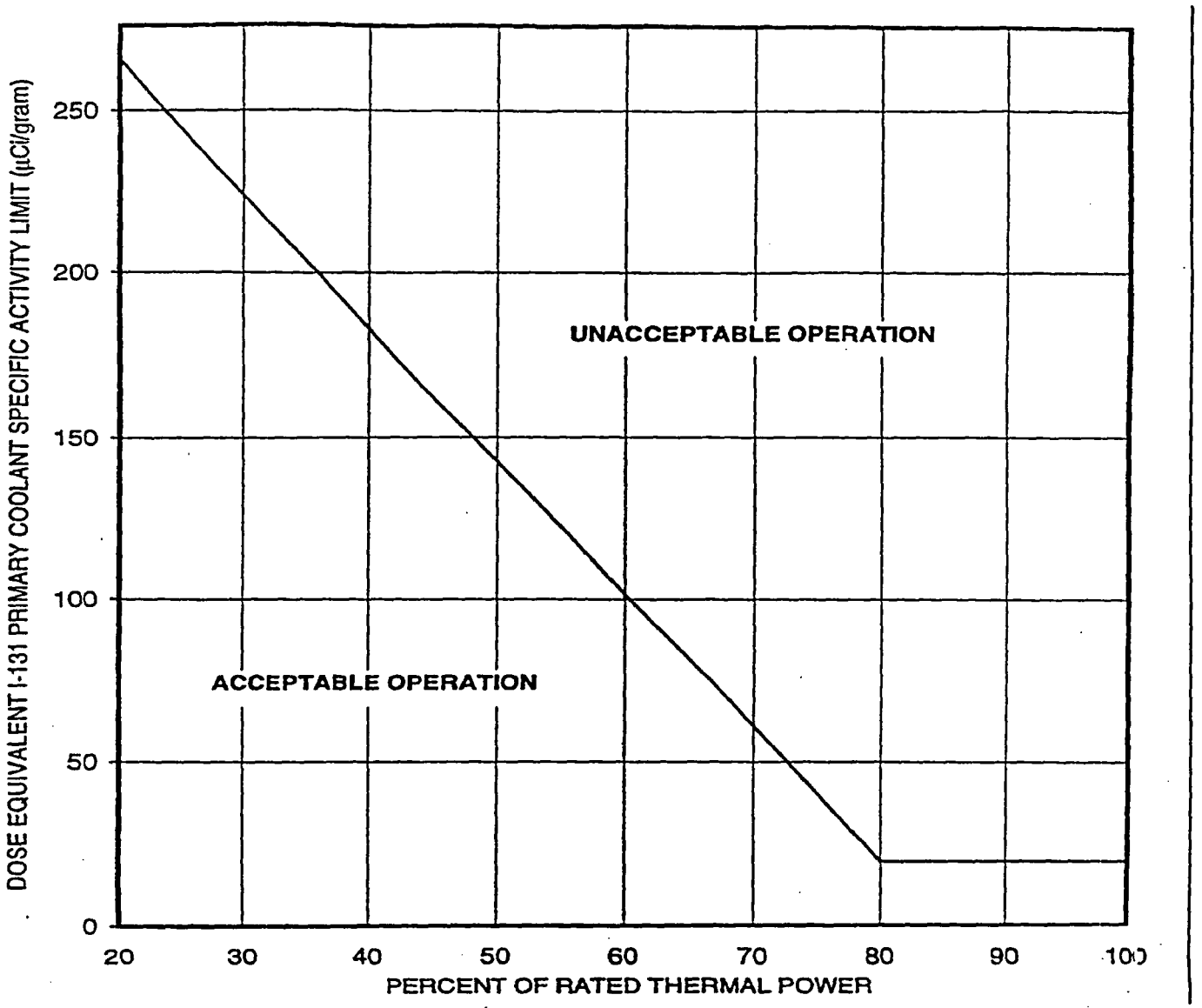

FIGURE 3.4-1
DOSE EQUIVALENT I-131 Primary Coolant Specific Activity Limit
Versus Percent of RATED THERMAL POWER with the Primary
Coolant Specific Activity > 0.35 µCi/gram DOSE EQUIVALENT I-131

3/4.5.2 ECCS SUBSYSTEMS - $T_{avg} \geq 350°F$

LIMITING CONDITION FOR OPERATION

3.5.2 Two separate and independent ECCS subsystems shall be OPERABLE[1][2] with each subsystem comprised of:

a. One OPERABLE centrifugal charging pump,

b. One OPERABLE low head safety injection pump, and

c. An OPERABLE flow path capable of taking suction from the refueling water storage tank on a safety injection signal and transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

---

(1) In MODE 3, one of the required centrifugal charging pumps may be made incapable of injecting to support transition into or from the Applicability of Specification 3.4.9.3 for up to 4 hours or until the temperature of all RCS cold legs exceeds the OPPS enable temperature specified in the PTLR plus 25°F, whichever comes first.

(2) In MODE 3, the ECCS automatic HHSI flow path may be isolated to support transition into or from the Applicability of Specification 3.5.4 for up to 4 hours or until the temperature of all RCS cold legs exceeds the OPPS enable temperature specified in the PTLR plus 25°F, whichever comes first.

3/4.5.3 ECCS SUBSYSTEMS - T_{avg} < 350°F

LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

a. One OPERABLE centrifugal charging pump,

b. One OPERABLE Low Head Safety Injection Pump, and

c. An OPERABLE flow path capable of taking suction from the refueling water storage tank upon being manually realigned and transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODE 4.

ACTION:

- - - - - - - - - - - - - - - - - GENERAL NOTE - - - - - - - - - - - - - -

Specification 3.0.4.b is not applicable to ECCS centrifugal charging pumps.

- -

a. With no ECCS subsystem OPERABLE because of the inoperability of either the centrifugal charging pump or the flow path from the refueling water storage tank, restore at least one ECCS subsystem to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.

b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

SURVEILLANCE REQUIREMENTS

4.5.3.1 The ECCS subsystem shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.5.2 except for requirements 4.5.2.c, 4.5.2.f.2 and 4.5.2.f.3.

3/4.5.4 HHSI FLOW PATH

LIMITING CONDITION FOR OPERATION

3.5.4 The ECCS automatic high head safety injection (HHSI) flow path shall be isolated.

APPLICABILITY: MODE 4 when any RCS cold leg temperature is less than or equal to the enable temperature specified in the PTLR,
MODE 5,
MODE 6 when the reactor vessel head is on.

ACTION:

With the ECCS automatic HHSI flow path not isolated, isolate the flow path within 1 hour.

SURVEILLANCE REQUIREMENTS

4.5.4. The ECCS automatic HHSI flow path shall be verified isolated at least once per 7 days except for purposes of flow testing or valve stroke testing.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

MAIN STEAM SAFETY VALVES (MSSVs)

LIMITING CONDITION FOR OPERATION

3.7.1.1 Five MSSVs per steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- - - - - - - - - - - - - - - GENERAL NOTE - - - - - - - - - - - - - - - -

Separate ACTION entry is allowed for each MSSV.

- -

a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels, within 4 hours reduce THERMAL POWER to less than or equal to 57% RTP; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.

b. With one or more steam generators with two or more MSSVs inoperable, or with one or more steam generators with one MSSV inoperable and the MTC positive at any power level, within 4 hours reduce THERMAL POWER to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs, and reduce the Power Range Neutron Flux-High reactor trip setpoint to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs within the next 32 hours[1]; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.

c. With one or more steam generators with four or more MSSVs inoperable, within 6 hours be in HOT STANDBY and in HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify[2] each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program. Following testing, lift settings shall be within ± 1 percent.

---

(1) Required to be performed only in MODE 1.
(2) Required to be performed only in MODES 1 and 2.

TABLE 3.7-1

OPERABLE Main Steam Safety Valves versus
Maximum Allowable Power

NUMBER OF OPERABLE MSSVs PER STEAM GENERATOR	MAXIMUM ALLOWABLE POWER (% RTP)
4	≤ 50
3	≤ 34
2	≤ 19

TABLE 3.7-2

STEAM LINE SAFETY VALVES PER LOOP

	VALVE NUMBER	LIFT SETTING***	LIFT SETTING TOLERANCES	ORIFICE DIAMETER
a.	SV-MS101A, B & C	1075 psig	+1%/-3%	4.250 in.
b.	SV-MS102A, B & C	1085 psig	±3%	4.515 in.
c.	SV-MS103A, B & C	1095 psig	±3%	4.515 in.
d.	SV-MS104A, B & C	1110 psig	±3%	4.515 in.
e.	SV-MS105A, B & C	1125 psig	±3%	4.515 in.

*** The Lift Setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

PRIMARY PLANT DEMINERALIZED WATER (PPDW)

LIMITING CONDITION FOR OPERATION

3.7.1.3 The primary plant demineralized water storage tank shall be OPERABLE with a minimum usable volume of 130,000 gallons.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With the PPDW storage tank water volume not within the limit, within 4 hours either:

a. Restore the water volume to within the limit or be in HOT SHUTDOWN within the next 12 hours, or

b. Demonstrate the OPERABILITY of the reactor plant river water system as a backup supply to the auxiliary feedwater pumps and restore the PPDW storage tank water volume to within its limit within 7 days or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3 The PPDW storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the water level.

ACTIVITY

LIMITING CONDITION FOR OPERATION

3.7.1.4 The specific activity of the secondary coolant system shall be ≤ 0.10 µCi/gram DOSE EQUIVALENT I-131.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the specific activity of the secondary coolant system > 0.10 µCi/gram DOSE EQUIVALENT I-131, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.4 The specific activity of the secondary coolant system shall be determined to be within the limit by performance of the sampling and analysis program of Table 4.7-2.

transactions shall have no effect on the license for the BVPS Unit 2 facility throughout the term of the license.

(b) Further, the licensees are also required to notify the NRC in writing prior to any change in: (i) the term or conditions of any lease agreements executed as part of these transactions; (ii) the BVPS Operating Agreement, (iii) the existing property insurance coverage for BVPS Unit 2, and (iv) any action by a lessor or others that may have adverse effect on the safe operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations set forth in 10 CFR Chapter 1 and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

FENOC is authorized to operate the facility at a steady state reactor core power level of 2900 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 156, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. FENOC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

DEFINED TERMS

1.1 The DEFINED TERMS of this section appear in capitalized type and are applicable throughout these Technical Specifications.

THERMAL POWER

1.2 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

RATED THERMAL POWER

1.3 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant as specified in the Licensing Requirements Manual, and shall not exceed 2900 MWt.

OPERATIONAL MODE

1.4 An OPERATIONAL MODE shall correspond to any one inclusive combination of core reactivity condition, power level, and average reactor coolant temperature specified in Table 1.1.

ACTION

1.5 ACTION shall be those additional requirements specified as corollary statements to each principal specification and shall be part of the specifications.

OPERABLE - OPERABILITY

1.6 A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electric power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related safety function(s).

REPORTABLE EVENT

1.7 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

CONTAINMENT INTEGRITY

1.8 CONTAINMENT INTEGRITY shall exist when:

1.8.1 All penetrations required to be closed during accident conditions are either:

a. Capable of being closed by an OPERABLE containment automatic isolation valve system, or

2.1 SAFETY LIMITS

REACTOR CORE

2.1.1 The combination of THERMAL POWER, pressurizer pressure, and the highest operating loop coolant temperature (T_{avg}) shall not exceed the limits specified in the COLR; and the following Safety Limits shall not be exceeded:

2.1.1.1 The departure from nucleate boiling ratio (DNBR) shall be maintained ≥ 1.17 for WRB-1 DNB correlation for Vantage 5H (V5H) fuel assemblies, and ≥ 1.14 for WRB-2M DNB correlation for Robust Fuel Assemblies (RFA).

2.1.1.2 The peak fuel centerline temperature shall be maintained ≤ 4700°F.

APPLICABILITY: MODES 1 and 2.

ACTION:

If Safety Limit 2.1.1 is violated, restore compliance and be in HOT STANDBY within 1 hour.

REACTOR COOLANT SYSTEM PRESSURE

2.1.2 The Reactor Coolant System pressure shall not exceed 2735 psig.

APPLICABILITY: MODES 1, 2, 3, 4, and 5.

ACTION:

MODES 1 and 2

Whenever the Reactor Coolant System pressure has exceeded 2735 psig, be in HOT STANDBY with the Reactor Coolant System pressure within its limit within 1 hour.

MODES 3, 4, and 5

Whenever the Reactor Coolant System pressure has exceeded 2735 psig, reduce the Reactor Coolant System pressure to within its limit within 5 minutes.

Refueling Water Storage Tank (RWST)

LIMITING CONDITION FOR OPERATION

3.1.2.8 The RWST shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 & 4.

ACTION:

With the refueling water storage tank inoperable, restore the tank to OPERABLE status within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.8 The RWST shall be verified OPERABLE:

a. At least once per 7 days by:

1. Verifying the boron concentration is between 2400 and 2600 ppm, and

2. Verifying a minimum usable volume of 859,248 gallons.

b. At least once per 24 hours by verifying the RWST solution temperature is $\geq$ 45°F and $\leq$ 65°F when the RWST ambient air temperature is < 45°F or > 65°F.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	ALLOWABLE VALUE	APPLICABLE MODES	ACTION
1.	Manual Reactor Trip	2	1	2	N.A.	1, 2, 3(3), 4(3) and 5(3)	12
2.	Power Range, Neutron Flux						
	a. High Setpoint	4	2	3	≤ 109.5% of RTP*	1, 2	2
	b. Low Setpoint	4	2	3	≤ 25.5% OF RTP*	1(1), 2	2
3.	Power Range, Neutron Flux High Positive Rate	4	2	3	≤ 5.5% of RTP* with a time constant ≥ 2 seconds	1, 2	2
4.	DELETED						
5.	Intermediate Range, Neutron Flux	2	1	2	≤ 27.9% of RTP*	1(1), 2, 3(3), 4(3) and 5(3)	3
6.	Source Range(8), Neutron Flux						
	a. With Rod Withdrawal Capability	2	1	2	≤ 1.3×10^5 cps	2(2), 3(3), 4(3) and 5(3)	4
	b. With All Rods Fully Inserted and Without Rod Withdrawal Capability	2	0	1	N.A.	3(9), 4(9), and 5(9)	5

* = RATED THERMAL POWER

(8) Alternate detectors may only be used for monitoring purposes Without Rod Withdrawal Capability until detector functions are modified to permit equivalent alarm and trip functions.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

Functional Unit	Channel Check	Channel Calibration	Channel Functional Test	Modes in Which Surveillance Required
1. Manual Reactor Trip	N.A.	N.A.	S/U(1), R(10)	1, 2, 3(14), 4(14), 5(14)
2. Power Range, Neutron Flux				
a. High Setpoint	S	D(2), M(3) and Q(6)	Q	1, 2
b. Low Setpoint	S	R(6)	S/U(1)	1(7), 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(6)	Q	1, 2
4. DELETED				
5. Intermediate Range, Neutron Flux	S	R(6)	S/U(1)	1, 2, 3(14), 4(14), 5(14)
6. Source Range(15), Neutron Flux				
a. With Rod Withdrawal Capability	S	R(6)	Q(8)	2, 3(14), 4(14) and 5(14)
b. With All Rods Inserted and Without Rod Withdrawal Capability	S	R(6)	Q(8)	3, 4 and 5
7. Overtemperature ΔT	S	R(6)	Q	1, 2
8. Overpower ΔT	S	R	Q	1, 2
9. Pressurizer Pressure-Low (Above P-7)	S	R	Q	1, 2
10. Pressurizer Pressure-High	S	R	Q	1, 2
11. Pressurizer Water Level-High (Above P-7)	S	R	Q	1, 2

3/4.4.3 SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting* of 2485 psig + 1.6% - 3%.**

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 with all RCS cold leg temperatures > the enable temperature specified in the PTLR.

ACTION:

a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN with any RCS cold leg temperature ≤ the enable temperature specified in the PTLR and apply RCS overpressure protection requirements in accordance with Specification 3.4.9.3 within 12 hours.

b. After any pressurizer code safety valve lift, as indicated by the safety valve position indicator, involving loop seal or water discharge; be in at least HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN with any RCS cold leg temperature ≤ the enable temperature specified in the PTLR and apply RCS overpressure protection requirements in accordance with Specification 3.4.9.3 within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional requirements other than those required by Specification 4.0.5.

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* The lift setting shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

** Within ± 1% following pressurizer code safety valve testing.

SURVEILLANCE REQUIREMENTS (Continued)

4. Percent Degradation means the percentage of the tube or sleeve wall thickness affected or removed by degradation.

5. Defect means an imperfection of such severity that it exceeds the plugging or repair limit. A tube containing a defect is defective. Any tube which does not permit the passage of the eddy-current inspection probe shall be deemed a defective tube.

6. Plugging or Repair Limit means the imperfection depth at or beyond which the tube shall be removed from service by plugging or repaired by sleeving in the affected area because it may become unserviceable prior to the next inspection. The plugging or repair limit imperfection depths are specified in percentage of nominal wall thickness as follows:

   a) Original tube wall 40%

      This definition does not apply to tube support plate intersections for which the voltage-based repair criteria are being applied. Refer to 4.4.5.4.a.10 for the repair limit applicable to these intersections.

   b) ABB Combustion Engineering TIG welded sleeve wall 27%

   c) Westinghouse laser welded sleeve wall 25%

7. Unserviceable describes the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an Operating Basis Earthquake, a loss-of-coolant accident, or a steamline or feedwater line break as specified in 4.4.5.3.c, above.

8. Tube Inspection means an inspection of the steam generator tube from the point of entry (hot-leg side) completely around the U-bend to the top support to the cold-leg.

SURVEILLANCE REQUIREMENTS (Continued)

9. Tube Repair refers to sleeving which is used to maintain a tube in-service or return a tube to service. This includes the removal of plugs that were installed as a corrective or preventive measure. The following sleeve designs have been found acceptable:

   a) ABB Combustion Engineering TIG welded sleeves, CEN-629-P, Revision 02 and CEN-629-P Addendum 1.

   b) Westinghouse laser welded sleeves, WCAP-13483, Revision 2.

10. Tube Support Plate Plugging Limit is used for the disposition of an alloy 600 steam generator tube for continued service that is experiencing predominantly axially oriented outside diameter stress corrosion cracking confined within the thickness of the tube support plates. At tube support plate intersections, the plugging (repair) limit is based on maintaining steam generator tube serviceability as described below:

   a) Steam generator tubes, whose degradation is attributed to outside diameter stress corrosion cracking within the bounds of the tube support plate with bobbin voltages less than or equal to 2.0 volts will be allowed to remain in service.

   b) Steam generator tubes, whose degradation is attributed to outside diameter stress corrosion cracking within the bounds of the tube support plate with a bobbin voltage greater than 2.0 volts will be repaired or plugged, except as noted in 4.4.5.4.a.10.c below.

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

ACCUMULATORS

LIMITING CONDITION FOR OPERATION

3.5.1 Each Reactor Coolant System accumulator shall be OPERABLE with:

a. The isolation valve open,

b. Between 6898 gallons and 8019 gallons of usable borated water,

c. Between 2300 and 2600 ppm of boron, and

d. A nitrogen cover-pressure of between 611 and 685 psig.

APPLICABILITY: MODES 1, 2 and 3.*

ACTION:

a. With one accumulator inoperable due to boron concentration not within limits, restore the inoperable accumulator to OPERABLE status within 72 hours.

b. With one accumulator inoperable for reasons other than Action a, restore the inoperable accumulator to OPERABLE status within 24 hours.

c. With either Action a or b not being completed within the specified completion time, be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to ≤ 1000 psig within 12 hours.

SURVEILLANCE REQUIREMENTS

4.5.1 Each accumulator shall be demonstrated OPERABLE:

a. At least once per 12 hours by:

1. Verifying the usable borated water volume and nitrogen cover-pressure in the tanks are within limits, and

2. Verifying that each accumulator isolation valve is open.

*Pressurizer Pressure above 1000 psig.

3/4.5.4 SEAL INJECTION FLOW

LIMITING CONDITION FOR OPERATION

3.5.4 Reactor coolant pump seal injection flow shall be less than or equal to 28 gpm with the charging pump discharge pressure greater than or equal to 2457 psig and the seal injection flow control valve full open.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With the seal injection flow not within the limit, adjust manual seal injection throttle valves to give a flow within the limit with the charging pump discharge pressure greater than or equal to 2457 psig and the seal injection flow control valve full open within 4 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.

SURVEILLANCE REQUIREMENTS

4.5.4 Verify at least once per 31 days that the valves are adjusted to give a flow within the limit with the charging pump discharge at greater than or equal to 2457 psig and the seal injection flow control valve full open.(1)

(1) Not required to be performed until 4 hours after the Reactor Coolant System pressure stabilizes at greater than or equal to 2215 psig and less than or equal to 2255 psig.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

MAIN STEAM SAFETY VALVES (MSSVs)

LIMITING CONDITION FOR OPERATION

3.7.1.1 Five MSSVs per steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- - - - - - - - - - - - - - - GENERAL NOTE - - - - - - - - - - - - - - - -

Separate ACTION entry is allowed for each MSSV.

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a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels, within 4 hours reduce THERMAL POWER to less than or equal to 57% RTP; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.

b. With one or more steam generators with two or more MSSVs inoperable, or with one or more steam generators with one MSSV inoperable and the MTC positive at any power level, within 4 hours reduce THERMAL POWER to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs, and reduce the Power Range Neutron Flux-High reactor trip setpoint to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs within the next 32 hours(1); otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.

c. With one or more steam generators with four or more MSSVs inoperable, within 6 hours be in HOT STANDBY and in HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify(2) each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program. Following testing, lift settings shall be within ± 1 percent.

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(1) Required to be performed only in MODE 1.
(2) Required to be performed only in MODES 1 and 2.

TABLE 3.7-1

OPERABLE Main Steam Safety Valves versus
Maximum Allowable Power

NUMBER OF OPERABLE MSSVs PER STEAM GENERATOR	MAXIMUM ALLOWABLE POWER (% RTP)
4	≤ 50
3	≤ 34
2	≤ 19

TABLE 3.7-2

STEAM LINE SAFETY VALVES PER LOOP

	VALVE NUMBER	LIFT SETTING*	LIFT SETTING TOLERANCES	ORIFICE DIAMETER
a.	2MSS-SV101A, B & C	1075 psig	+1%/-3%	4.515 in.
b.	2MSS-SV102A, B & C	1085 psig	±3%	4.515 in.
c.	2MSS-SV103A, B & C	1095 psig	±3%	4.515 in.
d.	2MSS-SV104A, B & C	1110 psig	±3%	4.515 in.
e.	2MSS-SV105A, B & C	1125 psig	±3%	4.515 in.

* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

PRIMARY PLANT DEMINERALIZED WATER (PPDW)

LIMITING CONDITION FOR OPERATION

3.7.1.3 The primary plant demineralized water storage tank shall be OPERABLE with a minimum usable volume of 130,000 gallons.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With the PPDW storage tank water volume not within the limit, within 4 hours either:

a. Restore the water volume to within the limit or be in HOT SHUTDOWN within the next 12 hours, or

b. Demonstrate the OPERABILITY of the service water system as a backup supply to the auxiliary feedwater pumps and restore the PPDW storage tank water volume to within its limit within 7 days or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3 The PPDW storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the water level.

REPORTING REQUIREMENTS (Continued)

WCAP-8745-P-A, "Design Bases for the Thermal Overtemperature ΔT and Thermal Overpower ΔT Trip Functions," September 1986.

WCAP-12945-P-A, Volume 1 (Revision 2) and Volumes 2 through 5 (Revision 1), "Code Qualification Document for Best Estimate LOCA Analysis," March 1998 (Westinghouse Proprietary).

WCAP-10216-P-A, Revision 1A, "Relaxation of Constant Axial Offset Control-F_Q Surveillance Technical Specification," February 1994.

WCAP-14565-P-A, "VIPRE-01 Modeling and Qualification for Pressurized Water Reactor Non-LOCA Thermal-Hydraulic Safety Analysis," October 1999.

WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Reference Core Report," April 1995 (Westinghouse Proprietary).

WCAP-15025-P-A, "Modified WRB-2 Correlation, WRB-2M, for Predicting Critical Heat Flux in 17x17 Rod Bundles with Modified LPD Mixing Vane Grids," April 1999.

As described in reference documents listed above, when an initial assumed power level of 102% of rated thermal power is specified in a previously approved method, 100.6% of rated thermal power may be used when input for reactor thermal power measurement of feedwater flow is by the leading edge flow meter (LEFM).

Caldon, Inc. Engineering Report-80P, "Improving Thermal Power Accuracy and Plant Safety While Increasing Operating Power Level Using the LEFM$\sqrt{}$™ System," Revision 0, March 1997.

Caldon, Inc. Engineering Report-160P, "Supplement to Topical Report ER-80P: Basis for a Power Uprate With the LEFM$\sqrt{}$™ System," Revision 0, May 2000.